

**Commonwealth of Kentucky
Division for Air Quality**

PERMIT APPLICATION SUMMARY FORM

Completed by: Vahid Bakhtiar

GENERAL INFORMATION:

Name:	Ohio Valley Aluminum
Address:	1100 Brooks Industrial Rd. Shelbyville, KY 40065
Date application received:	June 6, 2008
SIC Code/SIC description:	3341
Source ID:	21-211-00001
Source A.I. #:	3953
Activity ID:	APE20080001
Permit:	F-06-039 R1

APPLICATION TYPE/PERMIT ACTIVITY:

<input type="checkbox"/> Initial issuance	<input type="checkbox"/> General permit
<input checked="" type="checkbox"/> Permit modification	<input checked="" type="checkbox"/> Conditional major
__Administrative	<input type="checkbox"/> Title V
__X_Minor	<input type="checkbox"/> Synthetic minor
__Significant	<input type="checkbox"/> Operating
<input type="checkbox"/> Permit renewal	<input checked="" type="checkbox"/> Construction/operating

COMPLIANCE SUMMARY:

<input type="checkbox"/> Source is out of compliance	<input type="checkbox"/> Compliance schedule included
<input checked="" type="checkbox"/> Compliance certification signed	

APPLICABLE REQUIREMENTS LIST:

<input type="checkbox"/> NSR	<input type="checkbox"/> NSPS	<input checked="" type="checkbox"/> SIP
<input type="checkbox"/> PSD	<input checked="" type="checkbox"/> NESHAPS	<input type="checkbox"/> Other
<input type="checkbox"/> Netted out of PSD/NSR	<input type="checkbox"/> Not major modification per 401 KAR 51:001, 1(116)(b)	

MISCELLANEOUS:

- ☐ Acid rain source
- ☐ Source subject to 112(r)
- ☒ Source applied for federally enforceable emissions cap
- ☐ Source provided terms for alternative operating scenarios
- ☒ Source subject to a MACT standard
- ☐ Source requested case-by-case 112(g) or (j) determination
- ☐ Application proposes new control technology
- ☐ Certified by responsible official
- ☐ Diagrams or drawings included
- ☐ Confidential business information (CBI) submitted in application
- ☐ Pollution Prevention Measures
- ☐ Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

Pollutant	*Actual (tpy)	Potential (tpy)
PM/PM ₁₀	8.049	62.60
SO ₂	0.1416	0.156
NO _x	33.04	36.5
CO	8.26	9.1
VOC	7.7876	8.72
Single HAPs	1.01	< 9.00
Source wide HAPs	1.01	< 22.5

* These numbers are based on 2007 EIS report.

SOURCE PROCESS DESCRIPTION:

Ohio Valley Aluminum submitted a permit renewal application to its existing conditional major permit (F-00-015) for a secondary aluminum smelting plant in Shelbyville, Kentucky. Ohio Valley Aluminum (OVA) Corporation is a secondary aluminum processing plant located in Shelby County. OVA is classified as a conditional major source based on its ability to maintain HCl emissions below the 10 tons per year threshold for major sources.

In 2004, furnace # 2 was modified by adding a new hood identical to the other existing two with overall capture efficiency of 100% to process coated aluminum. As their current permit states, only one furnace at a time will process coated aluminum scrap. Therefore, there will be no change in their emissions or their production rate. Ohio Valley Aluminum is subject to 40 CFR Subpart RRR for D/F emissions from group one furnaces (number 1, 2 and 5).

On January 4, 1999, OVA submitted a construction/operation permit application to process coated and uncoated scrap in the reverberatory furnaces #1 and #5. The Division issued the final permit for the construction/operation of furnaces #1 and #5 on September 27, 1999. OVA performed particulate and hydrogen chloride tests on Furnace #1 on January 18, 2000, to comply with the secondary aluminum MACT. The average particulate emission rate during the three tests was 1.29 lb/hr, with the allowable being 14.66 lb/hr. The average emission rate of hydrogen chloride was 0.027 lb/ton of aluminum, compared to the allowable of 0.4 lb/ton. The compliance tests demonstrated that OVA's operation of the furnaces were within the regulatory emission limitations set forth by the MACT standard for secondary aluminum production.

OVA installed fume hoods over the furnaces and ducted the exhaust gas stream to a lime-injected baghouse in order to meet National emission standards for hazardous air pollutants (NESHAP) for secondary aluminum production. Limiting the hazardous air pollutants (HAPs), allows OVA to be classified as a conditional major source. Due to OVA's status as an area source for HAPs, the requirement for Title V permitting was deferred until December 9, 2004.

Other emission units located at OVA and included in the source-wide permit are homogenizing furnace #6, homogenizing furnace #7, holding furnace and alloy furnace # 2B, holding furnace and alloy furnace #4, homogenizing furnace #5, and reverberatory furnace #2. 401 KAR 59:010, New

process operations, applies to all the emission points listed above. Compliance with the regulation is detailed in the emission limitations, monitoring, reporting, and recordkeeping subsections in the permit.

MINOR PERMIT REVISION 1, F-09-039 R1:

On June 6, 2008 Ohio Valley Aluminum Co., LLC (OVA) submitted an application to revise its existing permit F-06-039. OVA proposed to replace the open arch in Furnaces Numbers 1, 2 and 5 with a charge door to enclose the furnaces and control the exhaust of hot gases and products of combustion (POC) through the use of dampers and a new furnace flue. The damper and burner will be controlled using a series of limit switches and a PLC program to open and close the dampers depending on what is taking place inside the furnace. Emissions from the melting of other-than-clean (OTC) scrap will be captured using a hood and furnace flue duct designed in accordance with chapters 3 and 5 of the ACGIH ventilation manual. OVA is also researching ways to make these melting furnaces more energy efficient and reduce the carbon foot-print of the facility.

EMISSIONS AND OPERATING CAPS DESCRIPTIONS:

To preclude the requirements of a Title V permit, Ohio Valley Aluminum requested a self-imposed emission limitation of 9.00 tons per year of HCl. As their current permit states, only one furnace at a time will process coated aluminum scrap and no more than two furnaces shall be operated at the same time.

OPERATIONAL FLEXIBILITY:

None